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22879 7590 04/29/2009 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400				
EXAMINER HUANG, WEI WU				
ART UNIT 2618		PAPER NUMBER		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM

ipa.mail@hp.com

jessica.l.fusek@hp.com

### Office Action Summary

**Application No.**

10/688,652

**Applicant(s)**

ANDERSON ET AL.

**Examiner**

WEN W. HUANG

**Art Unit**

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-7,9-17 and 19-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,9-17 and 19-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Claims 1, 2, 4-7, 9-17 and 19-24 are pending.

Claims 3, 8 and 18 are canceled.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. Claims 6-7 and 9-14 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. According to para. [0066] of the Specification of the PGPUB of the instant application, the "computer readable storage medium" could be paper which is non-statutory.

MPEP 706.03(a) recites: For example, a mere arrangement of printed matter, though seemingly a "manufacture," is rejected as not being within the statutory classes. See *In re Miller*, 418 F.2d 1392, 164 USPQ 46 (CCPA 1969); *Ex parte Gwinn*, 112 USPQ 439 (Bd. App. 1955); and *In re Jones*, 373 F.2d 1007, 153 USPQ 77 (CCPA 1967).

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4-7, 9-17 and 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lamming et al. (US. 6,922,725 B2; hereinafter "Lamming") in view of Lin et al. (US. 6,757,070 B1; hereinafter "Lin"), Abe (US. 6,892,299 B2), Vidyanand (US. 6,967,728 B1) and Kiraly et al. (US. Pub No. 2004/0184070 A1; hereinafter "Kiraly").

Regarding **claim 1**, Lamming teaches a method for printing information at a remote location (see Lamming, fig. 2, col. 7, lines 54-67), comprising:

establishing (see Lamming, col. 8, lines 46-50) a network connection (see Lamming, fig. 1, components 102 and 112) at a remote location (see Lamming, fig. 1, component 110); and

receiving a list of printing devices (see Lamming, col. 8, lines 48-59) communicatively coupled to the print service and available to a mobile-computing device for printing (see Lamming, col. 8, lines 60-67).

Lamming is silent to teaching that comprising:

accepting and installing at the mobile-computing device a latest version of a common print driver from the print service;

requesting a print device context responsive to a printer selected from the list of printing devices;

using an application resident on the mobile-computing device to render information to the print device context, wherein the application generates a plurality of device commands responsive to the information to be printed;

forwarding the device commands to the print service, wherein the print service renders the device commands against the printer; and

upon termination of the network connection at the remote location, restoring a default-printing device resource pool as the list of printing devices that are available to be selected. However, the claimed limitation is well known in the art as evidenced by Lin, Abe, Vidyanand and Kiraly.

In the same field of endeavor, Lin teaches a method for printing information at a remote location (see Lin, fig. 1, col. 3, lines 31-40) comprising

requesting a print device context responsive to a printer selected from the list of printing devices (see Lin, fig. 6, col. 5, lines 50-60);

using an application resident on the mobile-computing device to render information to the print device context (see Lin, col. 3, lines 52-60; universal print driver), wherein the application generates a plurality of device commands responsive to the information to be printed (see Lin, col. 4, lines 2-5); and

forwarding the device commands to the print service, wherein the print service renders the device commands against the printer (see Lin, col. 4, lines 6-10)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Lamming with the teaching

of Lin in order to avoid the headache of installing new printer driver for every new printer added to the print server (see Lin, col. 2, lines 9-14).

The combination of Lamming and Lin is silent to teaching that comprising:  
accepting and installing at the mobile-computing device a latest version of a common print driver from the print service; and

upon termination of the network connection at the remote location, restoring a default-printing device resource pool as the list of printing devices that are available to be selected. However, the claimed limitation is well known in the art as evidenced by Abe, Vidyanand and Kiraly.

In the same field of endeavor, Abe teaches that comprising  
accepting and installing at the mobile-computing device a latest version of a print driver from a center server (see Abe, fig. 8, step 807; download (install) latest and most suitable printer driver; col. 7, lines 20-25).

Therefore, it would have been obvious to one of ordinary skill in the art at time of the invention was made to combine the teaching of Lamming and Lin with the teaching of Abe in order to allow appropriate printer driver to be downloaded (see Abe. Col. 1, lines 36-40).

The combination of Lamming, Lin and Abe is silent to teaching that wherein the printer driver is a common driver and the center server is the printer service; and  
upon termination of the network connection at the remote location, restoring a default-printing device resource pool as the list of printing devices that are available to

be selected. However, the claimed limitation is well known in the art as evidenced by Vidyanand and Kiraly.

In the same field of endeavor, Vidyanand teaches that wherein the printer driver is a common driver (see Vidyanand, fig. 4, common printer driver 14; col. 3, lines 28-36) and the center server is the print service (see Vidyanand, fig. 4, printer driver preference 18 within printer driver 14 is transferred via communication 48 and network 22 from the printer service 42; col. 5, lines 36-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Lamming, Lin and Abe with the teaching of Vidyanand in order to transfer commonly used printer drivers and provide common printer driver for newly found printers (see Vidyanand, col. 3, lines 8-24 and 33-36).

The combination of Lamming, Lin, Abe and Vidyanand is silent to teaching that wherein upon termination of the network connection at the remote location, restoring a default-printing device resource pool as the list of printing devices that are available to be selected. However, the claimed limitation is well known in the art as evidenced by Kiraly.

In the same field of endeavor, Kiraly teaches that upon termination of the network connection at the remote location (see Kiraly, para. [0058], a previously stored printer connection is removed), restoring a default-printing device resource pool as the list of printing devices that are available to be selected (see Kiraly, para. [0058], update the

old set of printer connections maintained; para. [0050], storing printer connections available to be selected, fig. 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Lamming, Lin, Abe and Vidyanand with the teaching of Kiraly in order to ensure that users will receive the new printer connection or avoid disconnected printer connection after a recently changed printer connection (see Kiraly, para. [0006]).

Regarding **claim 2**, the combination of Lamming, Lin, Abe, Vidyanand and Kiraly also teaches the method of claim 1, further comprising:

intercepting the device commands (see Lin, col. 3, lines 2-5);

generating an intermediate format (see Lin, col. 3, lines 54-59, application file 108); and

rendering the intermediate format before the step of forwarding (see Lin, col. 5, lines 2-7).

Regarding **claim 4**, the combination of Lamming, Lin, Abe, Vidyanand and Kiraly also teaches the method of claim 1, further comprising:

receiving a printer status from the print service (see Lamming, col. 21, lines 58-60 and col. 22, lines 52-59).



Regarding **claim 5**, the combination of Lamming, Lin, Abe, Vidyanand and Kiraly also teaches the method of claim 4, further comprising: forwarding the printer status to the application (see Lamming, col. 21, lines 58-60 and col. 22, lines 52-59).

Regarding **claim 6**, Lamming teaches a computer-readable storage medium (see Lamming, col. 24, lines 36-37) having stored thereon an executable instruction set (see Lamming, col. 24, lines 29-30), the instruction set, when executed by a processor (see Lamming, col. 24, lines 46-47), directs the processor to perform a method comprising:

sensing by the processor a change of connection status (see Lamming, col. 21, lines 48-51 and col. 20, lines 8-9) between a mobile-computing device (see Lamming, fig. 2, component 110) and a wireless access device (see Lamming, fig. 2, component 202) coupled to a local area network (see Lamming, fig. 2, component 120);

establishing by the processor (see Lamming, col. 19, lines 5-11) a communication session (see Lamming, fig. 16, component 1601) with a print service accessible via the local area network (see Lamming, fig. 16, component 1611) when the change of connection status indicates that the mobile-computing device has established a communication session with the wireless access device (see Lamming, col. 20, lines 8-13).

Lamming is silent to teaching that

wherein during the communication session the mobile-computing device uses a printer driver configured to generate a generic device context responsive to a designated printer coupled to the print service, and comprising:

using the printer driver to intercept graphics device commands generated by an application operative on the mobile-computing device; and

forwarding the graphics device commands by the processor to the print service, wherein the print service renders the graphics device commands against the designated printer,

wherein during the communication session, the mobile-computing device receives a common driver from the print service;

upon termination of the network connection at the remote location, restoring a default-printing device resource pool as the list of printing devices that are available to be selected. However, the claimed limitation is well known in the art as evidenced by Lin, Abe, Vidyanand and Kiraly.

In the same field of endeavor, Lin teaches that

wherein during the communication session the mobile-computing device (see Lin, fig. 1, laptop 20-m) uses a printer driver (see Lin, fig. 2, Universal Print Driver 105) configured to generate a generic device context responsive to a designated printer coupled to the print service (see Lin, fig. 6, col. 5, lines 50-60), and comprising:

using the printer driver to intercept graphics device commands generated by an application operative on the mobile-computing device (see Lin, col. 3, lines 52-60; fig. 2, universal print driver 105 and user application file 10); and

forwarding the graphics device commands by the processor to the print service (see Lin, col. 4, lines 2-5),

wherein the print service renders the graphics device commands against the designated printer (see Lin, col. 4, lines 6-10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Lamming with the teaching of Lin in order to avoid the headache of installing new printer driver for every new printer added to the print server (see Lin, col. 2, lines 9-14).

The combination of Lamming and Lin is silent to teaching that  
wherein during the communication session, the mobile-computing device receives a common driver from the print service; and

upon termination of the network connection at the remote location, restoring a default-printing device resource pool as the list of printing devices that are available to be selected. However, the claimed limitation is well known in the art as evidenced by Abe, Vidyanand and Kiraly

In the same field of endeavor, Abe teaches that comprising  
wherein during the communication session (see Abe, fig. 8, S803), the mobile-computing device receives a printer driver from the center server (see Abe, fig. 8, step 807; download (install) latest and most suitable printer driver; col. 7, lines 20-25).

Therefore, it would have been obvious to one of ordinary skill in the art at time of the invention was made to combine the teaching of Lamming and Lin with the teaching of Abe in order to allow appropriate printer driver to be downloaded (see Abe. Col. 1, lines 36-40).

The combination of Lamming, Lin and Abe is silent to teaching that wherein during the communication session, the printer driver is a common driver and the center server is the printer service. However, the claimed limitation is well known in the art as evidenced by Vidyanand and Kiraly.

In the same field of endeavor, Vidyanand teaches that wherein during the communication session (see Vidyanand, fig. 4, communication 48 and network 22), the printer driver is a common driver (see Vidyanand, fig. 4, common printer driver 14; col. 3, lines 28-36) and the center server is the print service (see Vidyanand, fig. 4, printer driver preference 18 within printer driver 14 is transferred via communication 48 and network 22 from the printer service 42; col. 5, lines 36-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Lamming, Lin and Abe with the teaching of Vidyanand in order to transfer commonly used printer drivers and provide common printer driver for newly found printers (see Vidyanand, col. 3, lines 8-24 and 33-36).

The combination of Lamming, Lin, Abe and Vidyanand is silent to teaching that wherein upon termination of the network connection at the remote location, restoring a default-printing device resource pool as the list of printing devices that are available to be selected. However, the claimed limitation is well known in the art as evidenced by Kiraly.

In the same field of endeavor, Kiraly teaches that upon termination of the network connection at the remote location (see Kiraly, para. [0058], a previously stored printer

connection is removed), restoring a default-printing device resource pool as the list of printing devices that are available to be selected (see Kiraly, para. [0058], update the old set of printer connections maintained; para. [0050], storing printer connections available to be selected, fig. 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Lamming, Lin, Abe and Vidyanand with the teaching of Kiraly in order to ensure that users will receive the new printer connection or avoid disconnected printer connection after a recently changed printer connection (see Kiraly, para. [0006]).

Regarding **claim 7**, the combination of Lamming, Lin, Abe, Vidyanand and Kiraly also teaches the computer-readable storage medium of claim 6, wherein using the printer driver comprises generating an intermediate format (see Lin, col. 3, lines 54-59, application file 108) and rendering the intermediate format before forwarding the graphics device commands (see Lin, col. 5, lines 2-7).

Regarding **claim 9**, the combination of Lamming, Lin, Abe, Vidyanand and Kiraly also teaches the computer-readable storage medium of claim 6, further comprising: receiving a printer status from the print service (see Lamming, col. 21, lines 58-60 and col. 22, lines 52-59).

Regarding **claim 10**, the combination of Lamming, Lin, Abe, Vidyanand and Kiraly also teaches the computer-readable storage medium of claim 6, further comprising: forwarding the printer status to the application (see Lamming, col. 21, lines 58-60 and col. 22, lines 52-59).

Regarding **claim 11**, the combination of Lamming, Lin, Abe, Vidyanand and Kiraly also teaches the computer-readable storage medium of claim 6, further comprising: displaying information indicative of a printing device available to the mobile-computing device (see Lin, fig. 6, "Select Device"; col. 5, lines 49-56).

Regarding **claim 12**, the combination of Lamming, Lin, Abe, Vidyanand and Kiraly also teaches the computer-readable storage medium of claim 6, further comprising: reporting information indicative of the condition of pending print tasks (see Lamming, col. 21, lines 58-60 and col. 22, lines 52-59).

Regarding **claim 13**, the combination of Lamming, Lin, Abe, Vidyanand and Kiraly also teaches the computer-readable storage medium of claim 6, further comprising: identifying a default device for print requests originating within the mobile-computing device (see Lamming, col. 19, lines 31-35).

Regarding **claim 14**, the combination of Lamming, Lin, Abe, Vidyanand and Kiraly also teaches the computer-readable storage medium of claim 6, further

comprising: reconfiguring the mobile-computing device in accordance with indicia of the default device (see Lamming, col. 19, lines 62-67 and col. 20, lines 24-26) when the change of connection status indicates that the communication session with the wireless access device has terminated (see Lamming, col. 21, lines 7-15).

Regarding **claim 15**, Lamming teaches a mobile computing device comprising:

means for generating a change of connection status (see Lamming, col. 21, lines 48-51 and col. 20, lines 8-9) between a mobile-computing device (see Lamming, fig. 2, component 110) and a wireless access device (see Lamming, fig. 2, component 202) communicatively coupled to a print service (see Lamming, fig. 16, component 1611);

means for establishing (see Lamming, col. 19, lines 5-11) a communication session (see Lamming, fig. 16, component 1601) with the print service when the change of connection status indicates that the mobile-computing device has established a connection with the wireless access device (see Lamming, col. 20, lines 8-13).

Lamming is silent to teaching that

wherein during the communication session the mobile-computing device uses a printer driver configured to generate a generic device context responsive to a designated printer coupled to the print service, and comprising:

means for intercepting graphics device commands generated by an application operative on the mobile-computing device; and

means for forwarding the graphics device commands to the print service,

wherein the print service renders the graphics device commands in accordance with the printer,

wherein the means for establishing a communication session further comprises means for receiving a common driver; and

means for restoring a default-printing device resource pool as the list of printing devices that are available to be selected upon termination of the network connection at the remote location. However, the claimed limitation is well known in the art as evidenced by Lin, Abe, Vidyanand and Kiraly .

In the same field of endeavor, Lin teaches that

wherein during the communication session the mobile-computing device (see Lin, fig. 1, laptop 20-m) uses a printer driver (see Lin, fig. 2, Universal Print Driver 105) configured to generate a generic device context responsive to a designated printer coupled to the print service (see Lin, fig. 6, col. 5, lines 50-60), and comprising:

means for intercepting graphics device commands generated by an application operative on the mobile-computing device (see Lin, col. 3, lines 52-60; fig. 2, universal print driver 105 and user application file 10); and

means for forwarding the graphics device commands to the print service (see Lin, col. 4, lines 2-5),

wherein the print service renders the graphics device commands in accordance with the printer (see Lin, col. 4, lines 6-10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Lamming with the teaching



of Lin in order to avoid the headache of installing new printer driver for every new printer added to the print server (see Lin, col. 2, lines 9-14).

The combination of Lamming and Lin is silent to teaching that  
wherein the means for establishing a communication session further comprises  
means for receiving a common driver; and  
means for restoring a default-printing device resource pool as the list of printing devices that are available to be selected upon termination of the network connection at the remote location. However, the claimed limitation is well known in the art as evidenced by Abe, Vidyanand and Kiraly.

In the same field of endeavor, Abe teaches that  
wherein the means for establishing a communication session further comprises  
means for receiving a printer driver (see Abe, fig. 8, steps 803 and 807; download (install) latest and most suitable printer driver; col. 7, lines 20-25).

Therefore, it would have been obvious to one of ordinary skill in the art at time of the invention was made to combine the teaching of Lamming and Lin with the teaching of Abe in order to allow appropriate printer driver to be downloaded (see Abe. Col. 1, lines 36-40).

The combination of Lamming, Lin and Abe is silent to teaching that wherein the printer driver is a common driver; and  
means for restoring a default-printing device resource pool as the list of printing devices that are available to be selected upon termination of the network connection at

the remote location. However, the claimed limitation is well known in the art as evidenced by Vidyanand and Kiraly.

In the same field of endeavor, Vidyanand teaches that wherein the printer driver is a common driver (see Vidyanand, fig. 4, common printer driver 14; col. 3, lines 28-36).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Lamming, Lin and Abe with the teaching of Vidyanand in order to transfer commonly used printer drivers and provide common printer driver for newly found printers (see Vidyanand, col. 3, lines 8-24 and 33-36).

The combination of Lamming, Lin, Abe and Vidyanand is silent to teaching means for restoring a default-printing device resource pool as the list of printing devices that are available to be selected upon termination of the network connection at the remote location. However, the claimed limitation is well known in the art as evidenced by Kiraly.

In the same field of endeavor, Kiraly teaches means for restoring a default-printing device resource pool as the list of printing devices that are available to be selected (see Kiraly, para. [0058], update the old set of printer connections maintained; para. [0050], storing printer connections available to be selected, fig. 7) upon termination of the network connection at the remote location (see Kiraly, para. [0058], a previously stored printer connection is removed).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Lamming, Lin, Abe and Vidyanand with the teaching of Kiraly in order to ensure that users will receive the new printer connection or avoid disconnected printer connection after a recently changed printer connection (see Kiraly, para. [0006]).

Regarding **claim 16**, the combination of Lamming, Lin, Abe, Vidyanand and Kiraly also teaches the mobile-computing device of claim 15, wherein the means for establishing a communication session with the print service comprises an application program (see Lamming, fig. 16, component 1604; col. 18, lines 60-62).

Regarding **claim 17**, the combination of Lamming, Lin, Abe, Vidyanand and Kiraly also teaches the mobile-computing device of claim 15, wherein the means for intercepting graphics device commands comprises a printer driver (see Lin, fig. 2, universal print driver 105; col. 4, lines 2-10).

Regarding **claim 19**, the combination of Lamming, Lin, Abe, Vidyanand and Kiraly also teaches the mobile-computing device of claim 15, further comprising: print task initialization means for receiving a user-selected input indicative of content desired to be printed by the printing device (see Lamming, fig. 6, component 602; col. 9, line 64 – col. 10, line 3).

Regarding **claim 20**, the combination of Lamming, Lin, Abe, Vidyanand and Kiraly also teaches the mobile-computing device of claim 19, further comprising: monitoring means for observing the condition of pending print tasks (see Lamming, fig. 5, component 502; col. 8, lines 36-43).

Regarding **claim 21**, Lamming teaches a mobile-computing apparatus, comprising:

- a processor (see Lamming, col. 24, lines 46-48);

- a memory coupled to the processor having stored therein a driver (see Lamming, col. 10, lines 56-65 and col. 24, lines 35-37) comprising:

- a communication interface (see Lamming, fig. 10, component 212, col. 7, line 57 and col. 12, lines 65-67) including:

- an application interface for communicatively coupling the driver to an application executing within the processor (see Lamming, fig. 16, interface between 1608 and 1610; col. 23, lines 28-45); and

- a print service interface for communicatively coupling the driver to a print service wirelessly coupled to the mobile-computing apparatus (see Lamming, fig. 10, components 106 and 108; fig. 16, print request 1620 and print response 1622).

Lamming is silent to teaching that comprising:

- an interceptor coupled to the communication interface, the interceptor configured to identify and forward graphics device commands issued by the application; and

a formatter coupled to the interceptor, wherein when the formatter is enabled, the formatter renders information desired to be printed from the mobile-communication device to an intermediate format communicated to the print service,

wherein the mobile-computing apparatus receiver the driver from the printer service, and

wherein the application interface is enabled to restore a default-printing device resource pool as the list of printing devices that are available to be selected upon termination of the network connection with the print service. However, the claimed limitation is well known in the art as evidenced by Lin, Abe, Vidyanand and Kiraly.

In the same field of endeavor, Lin teaches a mobile-computing apparatus (see Lin, fig. 1, laptop 20-m, fig. 2, universal print driver) comprising

an interceptor coupled to the communication interface, the interceptor configured to identify and forward graphics device commands issued by the application (see Lin, col. 4, lines 2-5, fig. 2, printer selection and parameters, data item 110); and

a formatter coupled to the interceptor, wherein when the formatter is enabled, the formatter renders information desired to be printed from the mobile-communication device to an intermediate format communicated to the print service (see Lin, col. 4, lines 6-10, fig. 2, data item 114, print data; col. 5, lines 2-9).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Lamming with the teaching of Lin in order to avoid the headache of installing new printer driver for every new printer added to the print server (see Lin, col. 2, lines 9-14).

The combination of Lamming and Lin is silent to teaching that wherein the mobile-computing apparatus receiver the driver from the printer service, and

wherein the application interface is enabled to restore a default-printing device resource pool as the list of printing devices that are available to be selected upon termination of the network connection with the print service. However, the claimed limitation is well known in the art as evidenced by Abe, Vidyanand and Kiraly.

In the same field of endeavor, Abe teaches that wherein the mobile-computing apparatus receiver the driver from the center server (see Abe, fig. 8, step 807; download (install) latest and most suitable printer driver; col. 7, lines 20-25).

Therefore, it would have been obvious to one of ordinary skill in the art at time of the invention was made to combine the teaching of Lamming and Lin with the teaching of Abe in order to allow appropriate printer driver to be downloaded (see Abe. Col. 1, lines 36-40).

The combination of Lamming, Lin and Abe is silent to teaching that wherein the center server is the printer service, and

wherein the application interface is enabled to restore a default-printing device resource pool as the list of printing devices that are available to be selected upon termination of the network connection with the print service. However, the claimed limitation is well known in the art as evidenced by Vidyanand and Kiraly.

In the same field of endeavor, Vidyanand teaches that wherein the center server is the print service (see Vidyanand, fig. 4, printer driver preference 18 within printer driver 14 is transferred via communication 48 and network 22 from the printer service 42; col. 5, lines 36-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Lamming, Lin and Abe with the teaching of Vidyanand in order to transfer commonly used printer drivers and provide common printer driver for newly found printers (see Vidyanand, col. 3, lines 8-24 and 33-36).

The combination of Lamming, Lin, Abe and Vidyanand is silent to teaching that wherein the application interface is enabled to restore a default-printing device resource pool as the list of printing devices that are available to be selected upon termination of the network connection with the print service. However, the claimed limitation is well known in the art as evidenced by Kiraly.

In the same field of endeavor, Kiraly teaches that wherein the application interface is enabled to restore a default-printing device resource pool as the list of printing devices that are available to be selected (see Kiraly, para. [0058], update the old set of printer connections maintained; para. [0050], storing printer connections available to be selected, fig. 7) upon termination of the network connection with the print service (see Kiraly, para. [0058], a previously stored printer connection is removed).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Lamming, Lin, Abe and

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Vidyanand with the teaching of Kiraly in order to ensure that users will receive the new printer connection or avoid disconnected printer connection after a recently changed printer connection (see Kiraly, para. [0006]).

Regarding **claim 22**, the combination of Lamming, Lin, Abe, Vidyanand and Kiraly also teaches the apparatus of claim 21, wherein when the formatter is disabled, the interceptor forwards the graphics device commands to the print service for rendering via a printer driver compatible with a select printer coupled to the print service (see Lin, col. 4, lines 2-10 and 54-60).

Regarding **claim 23**, the combination of Lamming, Lin, Abe, Vidyanand and Kiraly also teaches the apparatus of claim 21, further comprising: a message handler configured to receive indicia of a printer status (see Lamming, col. 21, lines 58-60 and col. 22, lines 52-59).

Regarding **claim 24**, the combination of Lamming, Lin, Abe, Vidyanand and Kiraly also teaches the apparatus of claim 23, wherein the message handler is configured to forward the printer status via the application interface to the application (see Lamming, col. 21, lines 58-60 and col. 22, lines 52-59).



***Response to Arguments***

Applicant's arguments with respect to claims 1, 6, 15 and 21 have been considered but are moot in view of the new ground(s) of rejection.

Regarding claim 1, Applicant also argues that prior art is silent to teaching accepting and installing at the mobile-computing device a latest version of a common print driver from the print service. However, the Examiner respectfully disagrees.

More specifically, the Examiner submits that Abe teaches that comprising accepting and installing at the mobile-computing device a latest version of a print driver from a center server (see Abe, fig. 8, step 807; download (install) latest and most suitable printer driver; col. 7, lines 20-25) and Vidyanand teaches that wherein the printer driver is a common driver (see Vidyanand, fig. 4, common printer driver 14; col. 3, lines 28-36) and the center server is the print service (see Vidyanand, fig. 4, printer driver preference 18 within printer driver 14 is transferred via communication 48 and network 22 from the printer service 42; col. 5, lines 36-45).

Therefore, Abe and Vidyanand teach accepting and installing at the mobile-computing device a latest version of a common print driver from the print service.

Regarding claim 6, Applicant argues that prior art is silent to teaching forwarding the graphics device commands by the processor to the print service,

wherein the print service renders the graphics device commands against the designated printer,

wherein during the communication session, the mobile-computing device receives a common driver from the print service. However, the Examiner respectfully disagrees.

More specifically, the Examiner submits that Lin teaches that forwarding the graphics device commands by the processor to the print service (see Lin, col. 4, lines 2-5) wherein the print service renders the graphics device commands against the designated printer (see Lin, col. 4, lines 6-10), Abe teaches that wherein during the communication session (see Abe, fig. 8, S803), the mobile-computing device receives a printer driver from the center server (see Abe, fig. 8, step 807; download (install) latest and most suitable printer driver; col. 7, lines 20-25), and Vidyanand teaches that wherein during the communication session (see Vidyanand, fig. 4, communication 48 and network 22), the printer driver is a common driver (see Vidyanand, fig. 4, common printer driver 14; col. 3, lines 28-36) and the center server is the print service (see Vidyanand, fig. 4, printer driver preference 18 within printer driver 14 is transferred via communication 48 and network 22 from the printer service 42; col. 5, lines 36-45).

Therefore, the Examiner submits that prior art teaches forwarding the graphics device commands by the processor to the print service, wherein the print service renders the graphics device commands against the designated printer, wherein during the communication session, the mobile-computing device receives a common driver from the print service.

Regarding claim 15, the Examiner submits that Lamming teaches means for establishing (see Lamming, col. 19, lines 5-11) a communication session (see Lamming, fig. 16, component 1601) with the print service when the change of connection status indicates that the mobile-computing device has established a connection with the wireless access device (see Lamming, col. 20, lines 8-13), Lin teaches that wherein during the communication session the mobile-computing device (see Lin, fig. 1, laptop 20-m) uses a printer driver (see Lin, fig. 2, Universal Print Driver 105) configured to generate a generic device context responsive to a designated printer coupled to the print service (see Lin, fig. 6, col. 5, lines 50-60), Abe teaches that wherein the means for establishing a communication session further comprises means for receiving a printer driver (see Abe, fig. 8, steps 803 and 807; download (install) latest and most suitable printer driver; col. 7, lines 20-25) and Vidyanand teaches that wherein the printer driver is a common driver (see Vidyanand, fig. 4, common printer driver 14; col. 3, lines 28-36).

Regarding claim 21, the Examiner submits that Lamming teaches a print service interface for communicatively coupling the driver to a print service wirelessly coupled to the mobile-computing apparatus (see Lamming, fig. 10, components 106 and 108; fig. 16, print request 1620 and print response 1622), Abe teaches that wherein the mobile-computing apparatus receiver the driver from the center server (see Abe, fig. 8, step 807; download (install) latest and most suitable printer driver; col. 7, lines 20-25), and Vidyanand teaches that wherein the center server is the print service (see Vidyanand,

fig. 4, printer driver preference 18 within printer driver 14 is transferred via communication 48 and network 22 from the printer service 42; col. 5, lines 36-45).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WEN W. HUANG whose telephone number is (571)272-7852. The examiner can normally be reached on 10am - 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on (571) 272-4177. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/W. W. H./  
Examiner, Art Unit 2618

/Matthew D. Anderson/  
Supervisory Patent Examiner, Art Unit 2618